

Building an Android VM to Control your Storz-Bickel Crafty

In order to control a Crafty, you need a phone, or tablet that can run the Crafty app and that has Bluetooth 4.0. If you do not own such a device another option is to run an Android Virtual Machine on your Windows PC.

Requirements

- Windows PC/laptop capable of running Oracle VirtualBox
- A Bluetooth 4.0 adapter for your system
- Oracle VirtualBox (4.3.18 at the time of writing this)
- Oracle VM VirtualBox Extension Pack
- Android-x86 4.4-r1
- Crafty App (apk file)

Steps

1. Download and install VirtualBox and the Extension Pack

<https://www.virtualbox.org/wiki/Downloads>

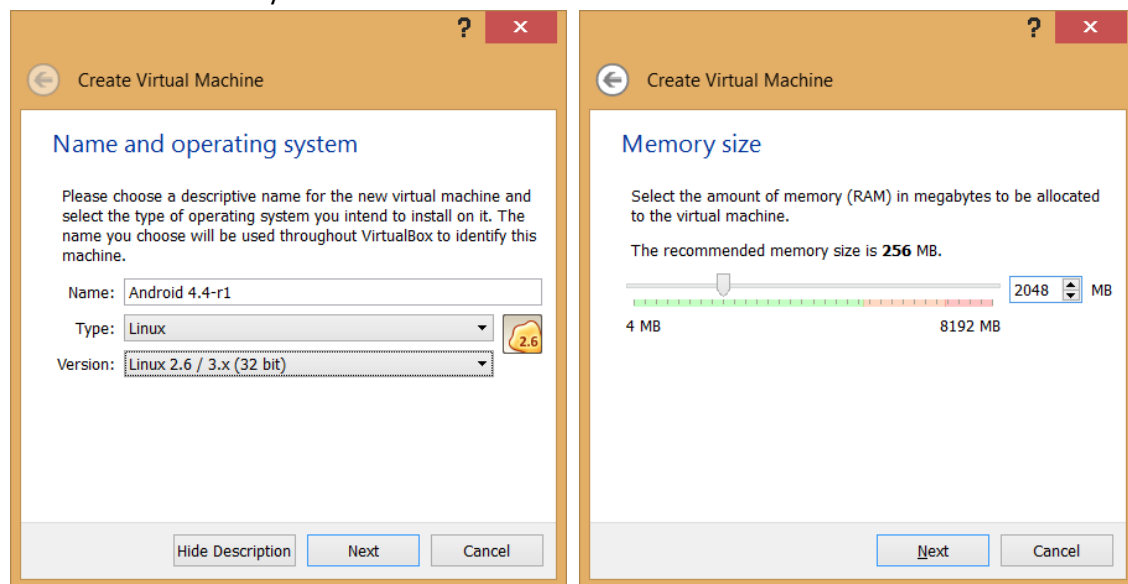
VirtualBox:

- o <http://download.virtualbox.org/virtualbox/4.3.18/VirtualBox-4.3.18-96516-Win.exe>

Ext. Pack:

- o http://download.virtualbox.org/virtualbox/4.3.18/Oracle_VM_VirtualBox_Extension_Pack-4.3.18-96516.vbox-extpack

2. Create a New VM for your Android environment



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Create Virtual Machine

Hard drive

If you wish you can add a virtual hard drive to the new machine. You can either create a new hard drive file or select one from the list or from another location using the folder icon.

If you need a more complex storage set-up you can skip this step and make the changes to the machine settings once the machine is created.

The recommended size of the hard drive is **8.00 GB**.

☐ Do not add a virtual hard drive
☒ **Create a virtual hard drive now**
☐ Use an existing virtual hard drive file

Android 4.4.vdi (Normal, 16.00 GB)

Create

Cancel

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Create Virtual Hard Drive

Hard drive file type

Please choose the type of file that you would like to use for the new virtual hard drive. If you do not need to use it with other virtualization software you can leave this setting unchanged.

☒ VDI (VirtualBox Disk Image)
☐ VMDK (Virtual Machine Disk)
☐ VHD (Virtual Hard Disk)
☐ HDD (Parallels Hard Disk)
☐ QED (QEMU enhanced disk)
☐ QCOW (QEMU Copy-On-Write)

Hide Description

Next

Cancel

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Create Virtual Hard Drive

Storage on physical hard drive

Please choose whether the new virtual hard drive file should grow as it is used (dynamically allocated) or if it should be created at its maximum size (fixed size).

A **dynamically allocated** hard drive file will only use space on your physical hard drive as it fills up (up to a maximum **fixed size**), although it will not shrink again automatically when space on it is freed.

A **fixed size** hard drive file may take longer to create on some systems but is often faster to use.

☒ Dynamically allocated
☐ Fixed size

Next

Cancel

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Create Virtual Hard Drive

File location and size

Please type the name of the new virtual hard drive file into the box below or click on the folder icon to select a different folder to create the file in.

Android 4.4-r1

Select the size of the virtual hard drive in megabytes. This size is the limit on the amount of file data that a virtual machine will be able to store on the hard drive.

4.00 MB

2.00 TB

16.00 GB

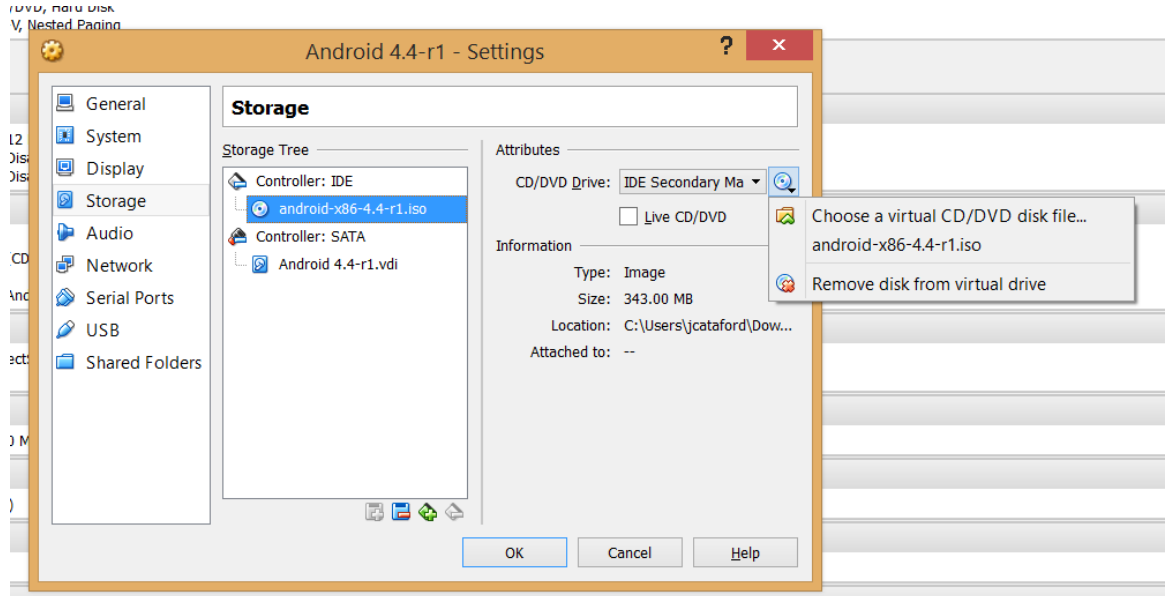
Create

Cancel

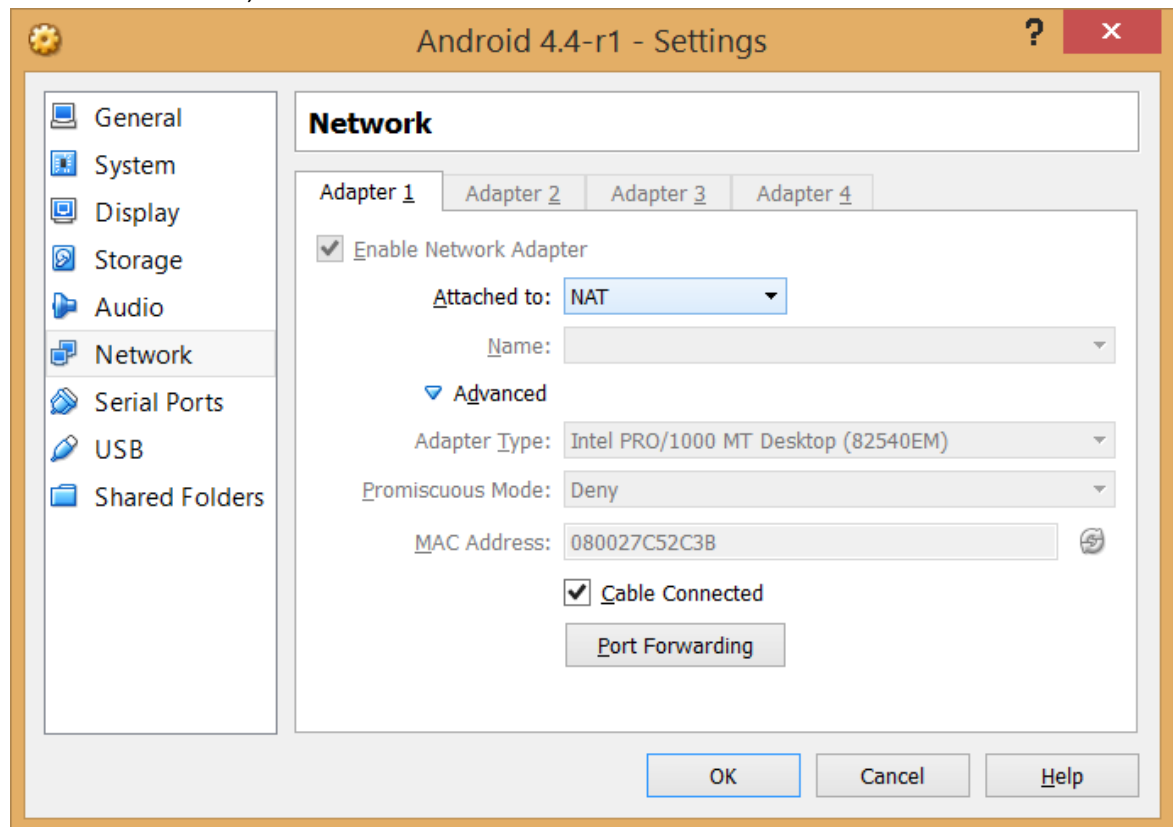
3. Download the Android-x86 4.4-r1 image

http://downloads.sourceforge.net/project/android-x86/Release%204.4/android-x86-4.4-r1.iso?r=http%3A%2F%2Fwww.android-x86.org%2Fdownload&ts=1414758657&use_mirror=superb-dca2

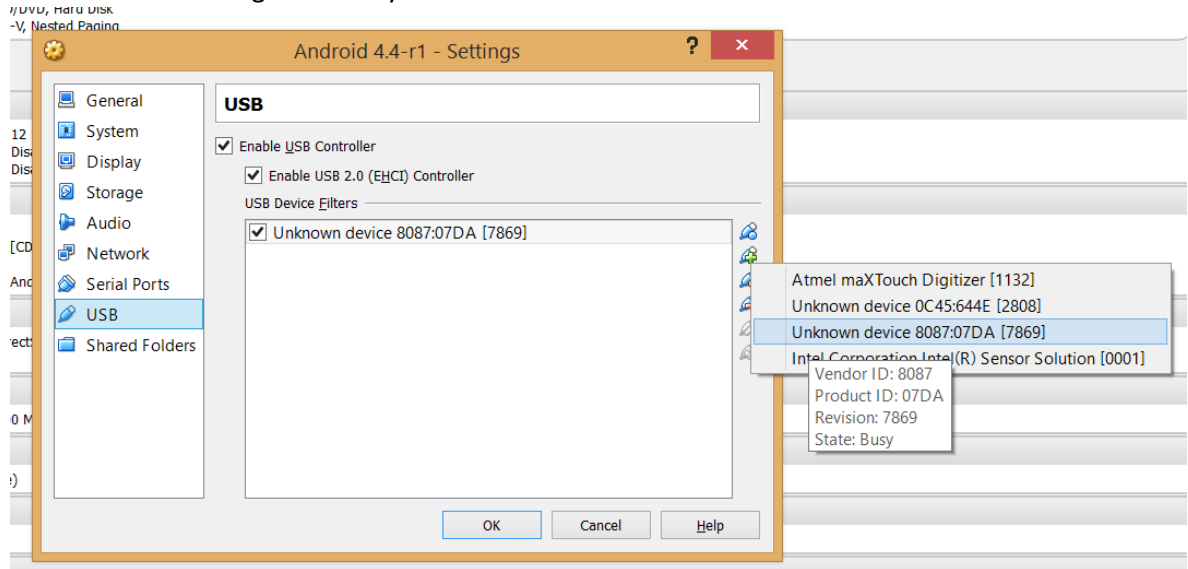
4. Open the settings for the newly created machine and mount the downloaded image (ISO) on the CD/DVD drive



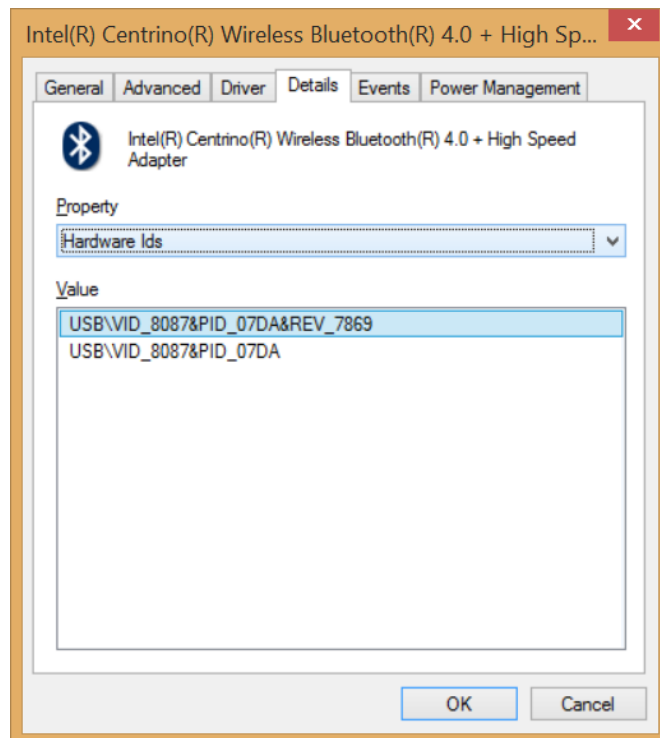
5. On the Network tab, make sure NAT is selected.



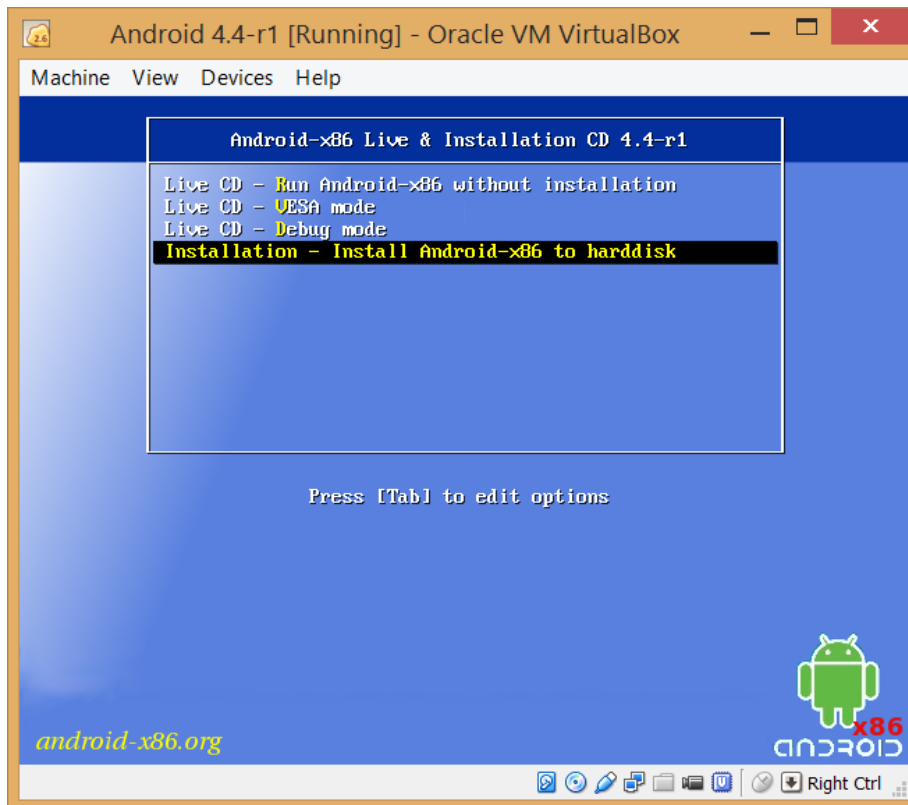
6. Go to the USB settings and add your Bluetooth device to the VM



In order to determine which is the correct USB device, go to Device Manager and open your Bluetooth Adapter's properties and look at the Hardware ID property on the Details tab to get the Vendor ID, Product ID, and Revision.

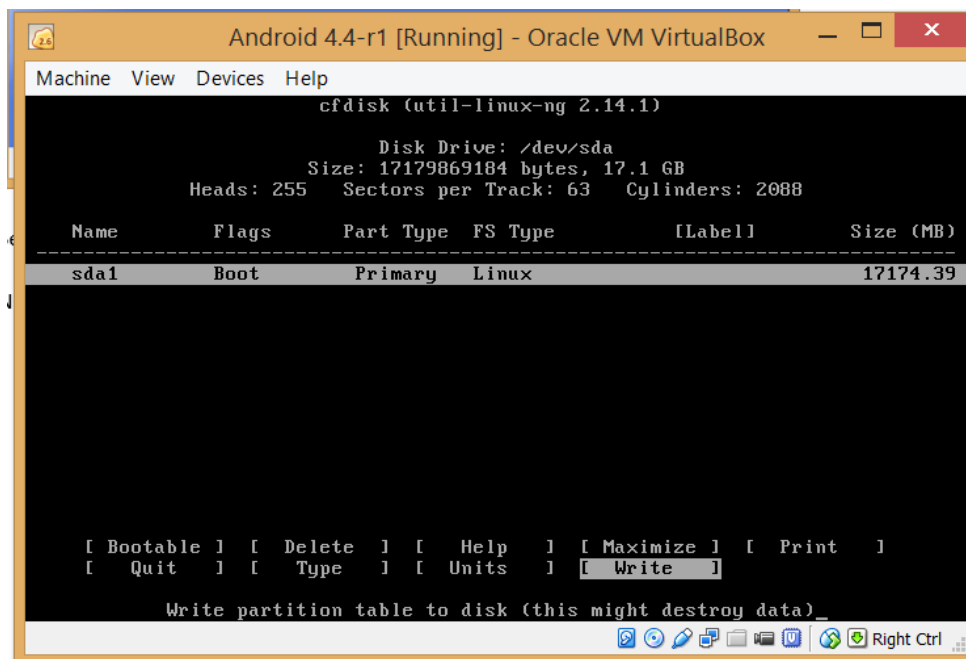


7. Start the VM and choose “Installation – Install Android-x86 to harddisk”

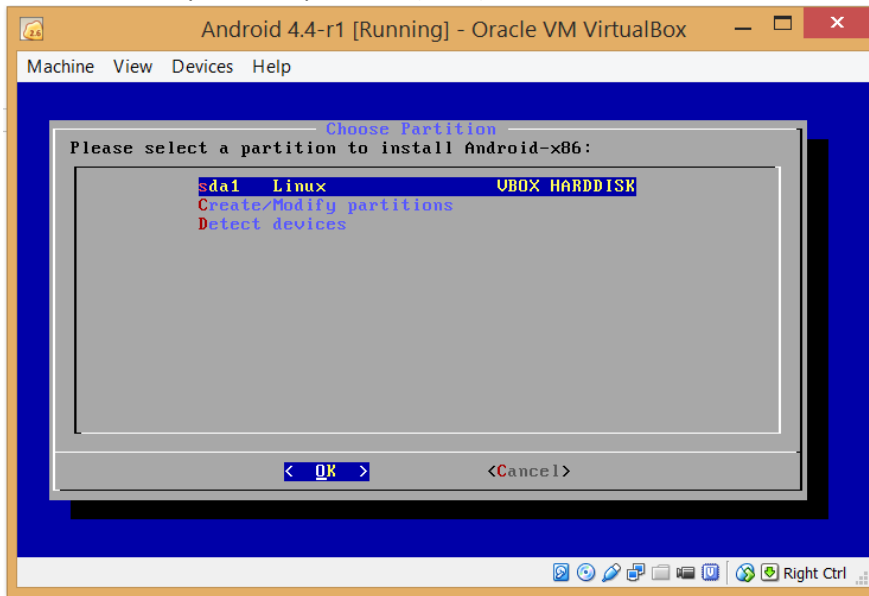


8. Select Create/Modify Partitions and create a new partition with the following steps:

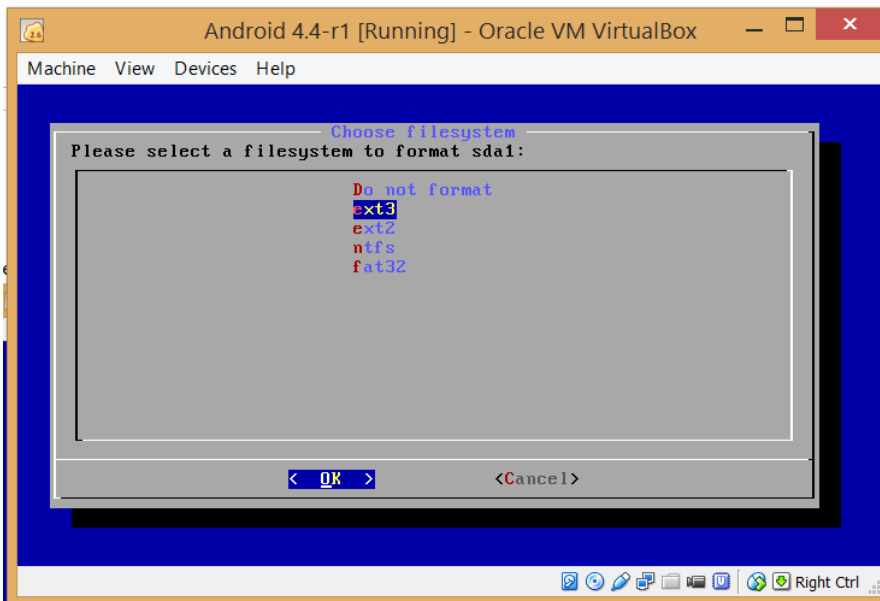
New -> Primary -> [select default size] -> Boot -> Write -> Quit



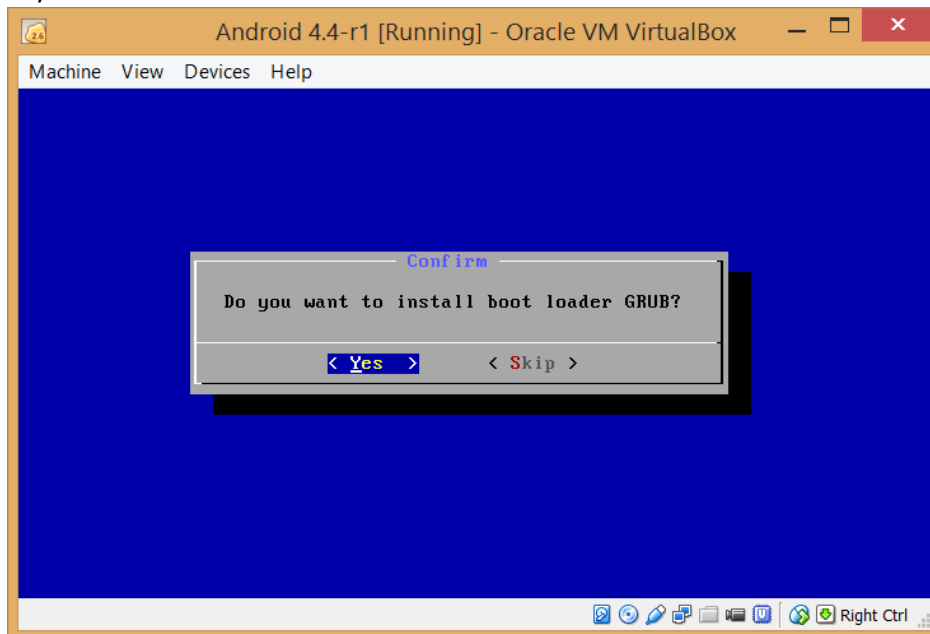
9. Select the newly created partition (sda1)



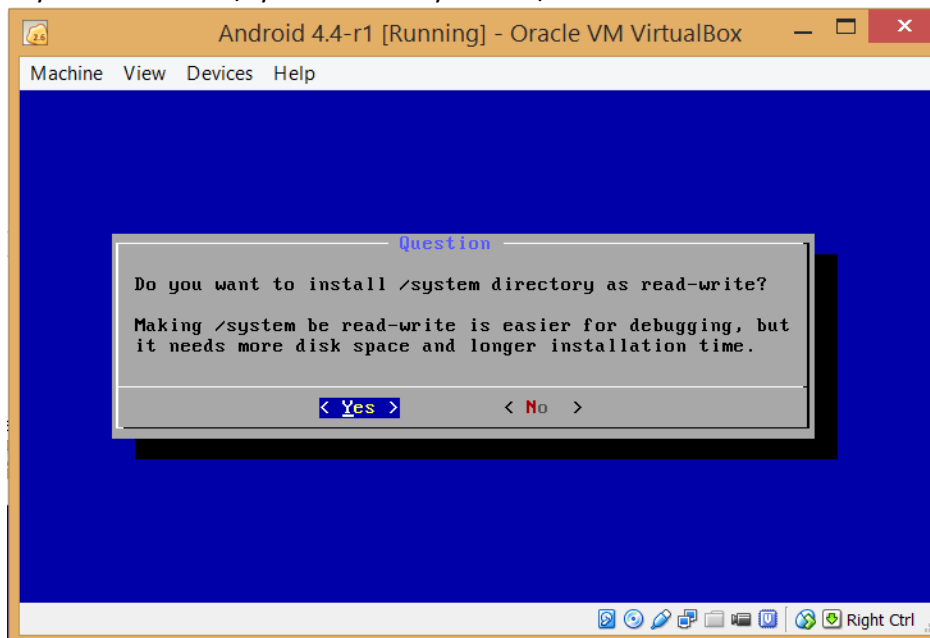
10. Choose "ext3" for the file system



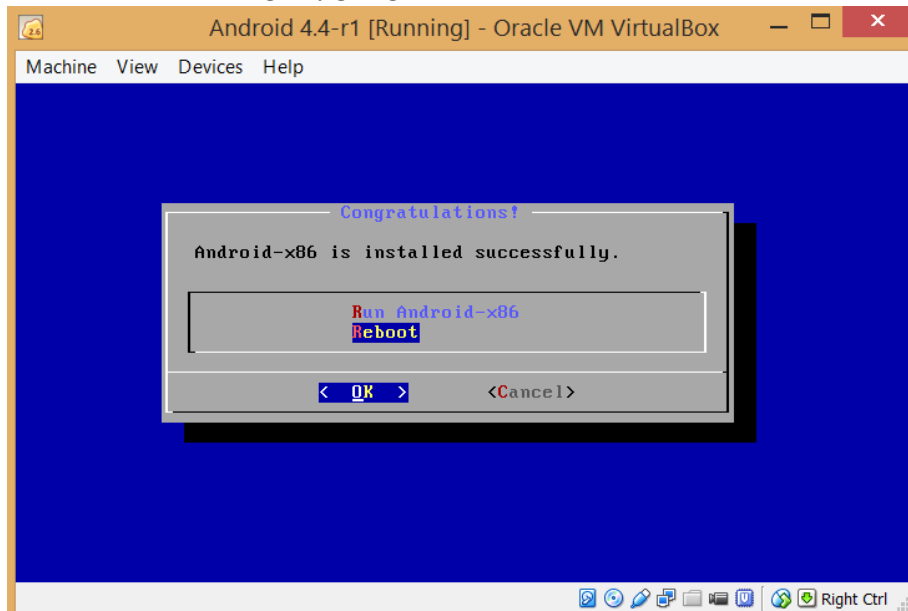
11. Say “Yes” to install the Grub boot loader



12. Say “Yes” to install /system directory as read/write

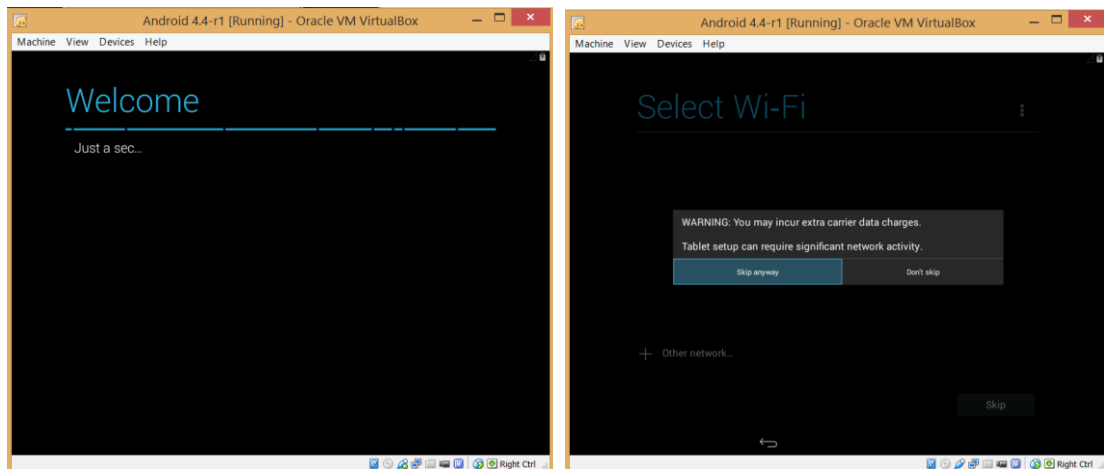


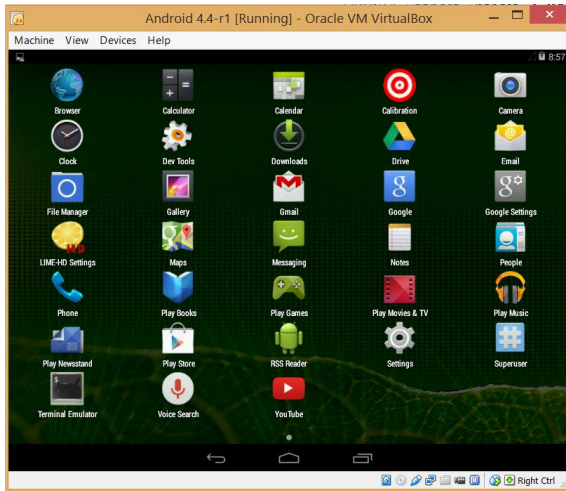
13. After files are done copying, “Reboot” (Before reboot, make sure to unmounts the CD/DVD Android-x86 ISO though by going to “Devices -> CD/DVD Devices -> [Unselect Android ISO]”



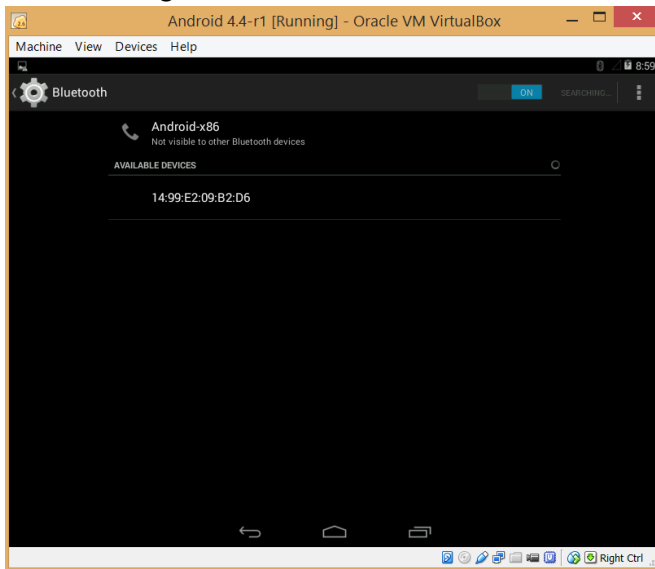
14. Your Android OS should now bootup with working network and Bluetooth.

- Select basically all the default settings
- Skip WiFi
- You don't need to configure a Google account



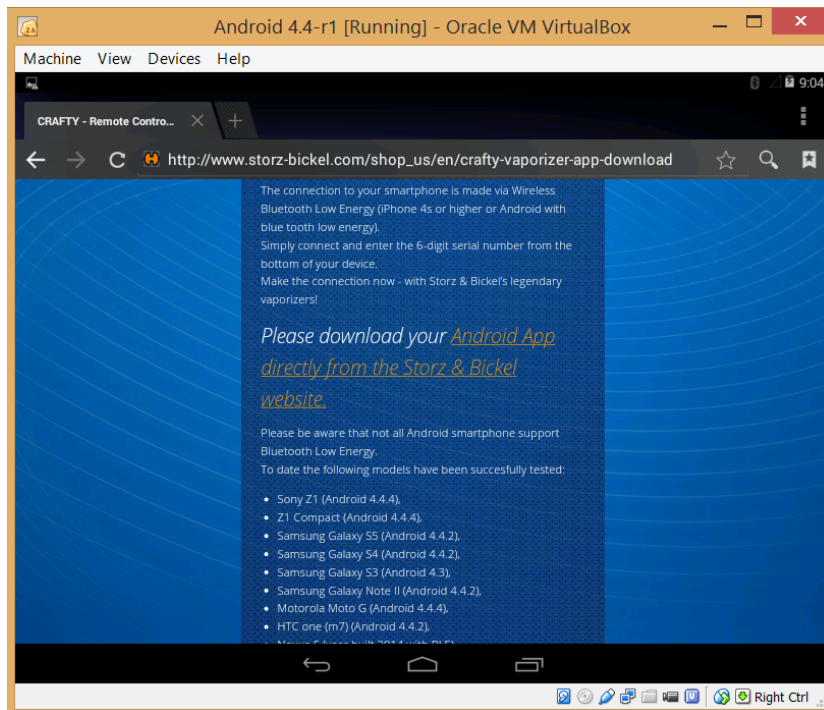


15. Go to “Settings” and turn Bluetooth on

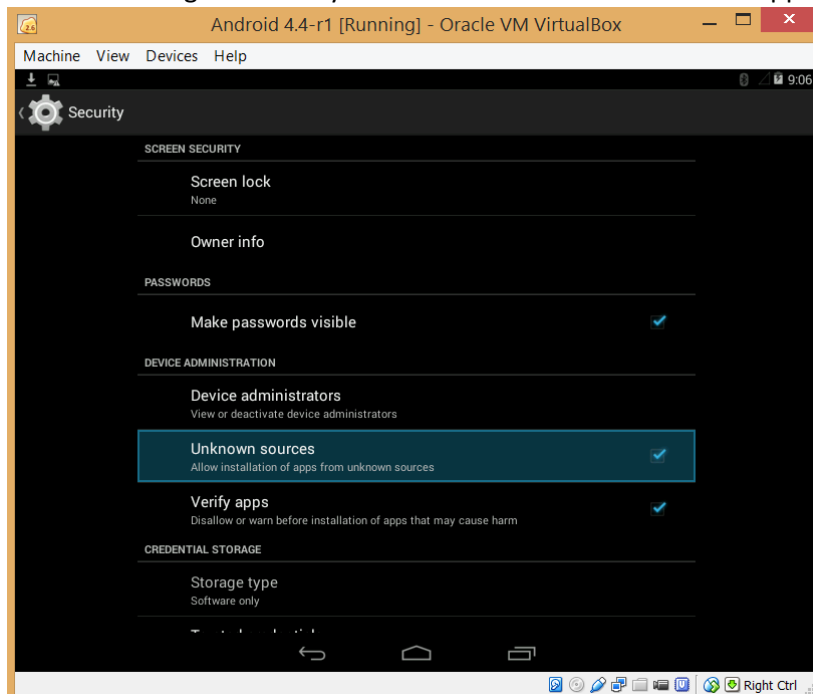


16. Open the Browser and go to the Storz-Bickel crafty page to download the app (or download directly using the following URL)

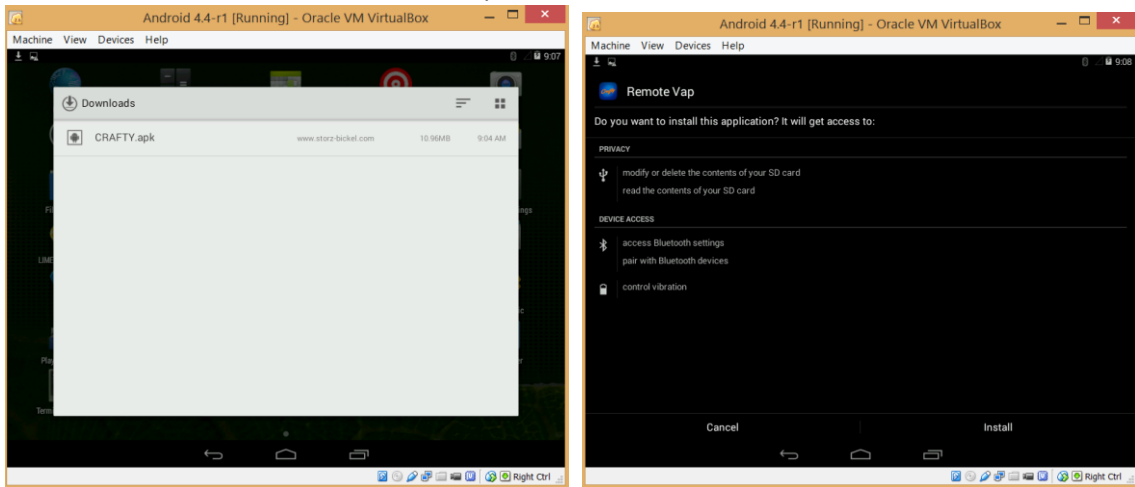
<http://www.storz-bickel.com/media/downloads/CRAFTY.apk>



17. Go into "Settings -> Security" and enable "Allow installation of apps from unknown sources"



18. Go to “Downloads” and install CRAFTY.apk



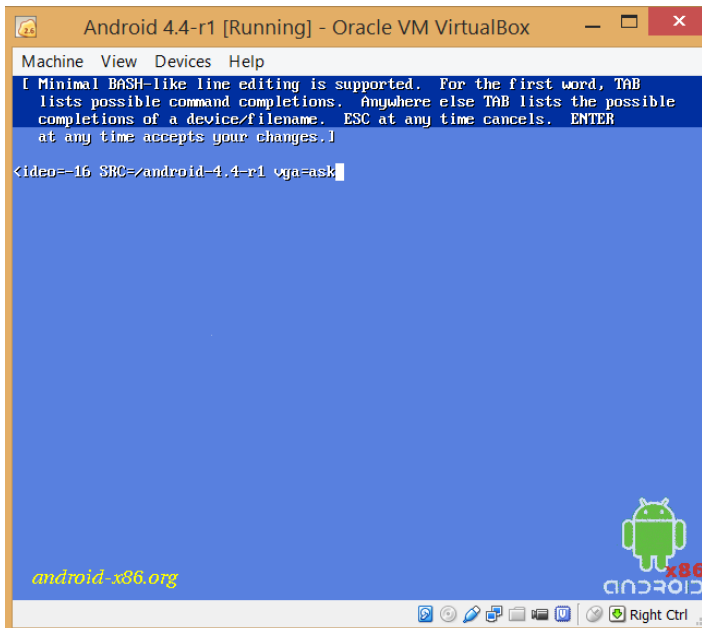
If you launch the app now, it will be very difficult to view since it will launch sideways!

19. Shutdown the Android device.
20. Launch a command prompt and navigate to the VirtualBox installation folder
(c:\program files\Oracle\VirtualBox)

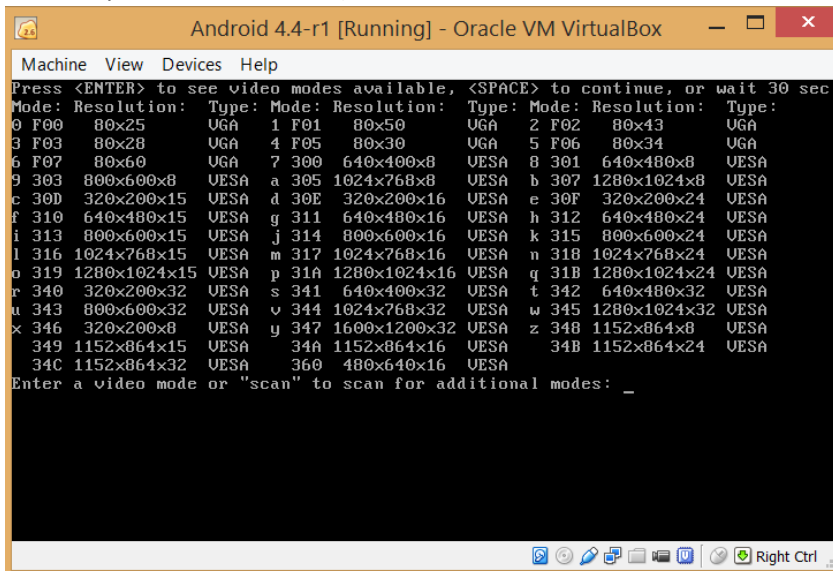
Use the following command to add an additional screen resolution:

```
VBoxManage.exe setextradata "Android 4.4-r1" "CustomVideoMode1" "480x640x16"
```

21. Start your VM, and at the Grub boot loader screen, press “a” and then append “vga=ask” to the end of the boot command line.

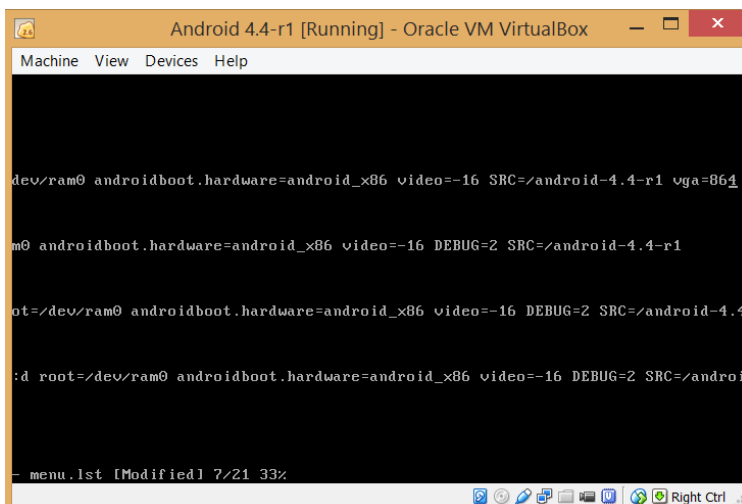


22. Take note of the hexadecimal mode # for your newly added resolution (eg. here it is 360 hex which equals 864 in decimal)

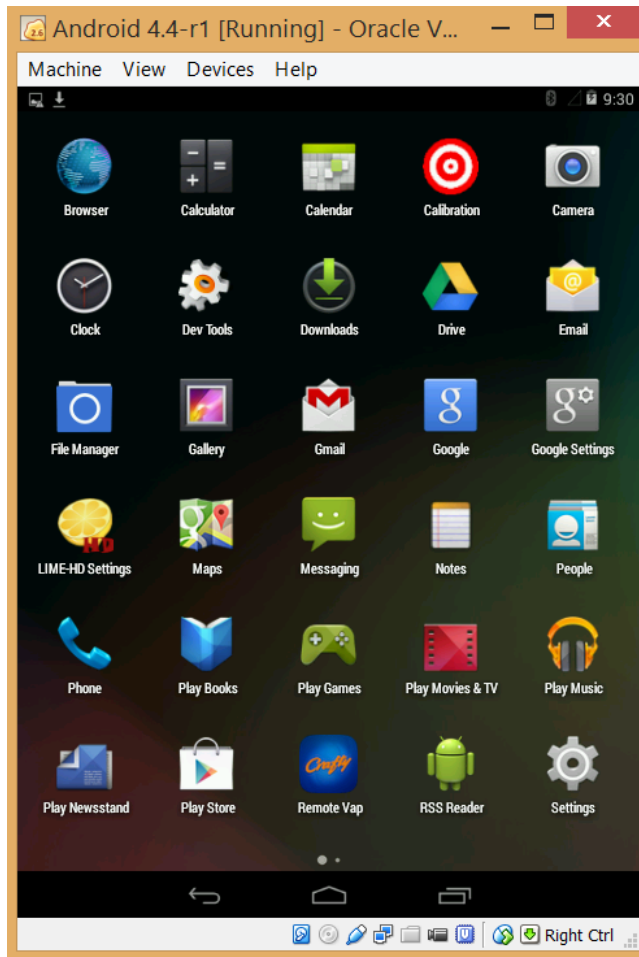


You can enter the video mode here, to boot up, but it will not be persistent.

23. Reboot, and at the Grub loader choose debug mode.
24. When you get to the command prompt (might have to press <enter> to make it show up), navigate to /mnt/grub ("cd /mnt/grub") and edit the menu.lst file ("vi menu.lst")
25. Add "vga=864" (the decimal video mode from above) to the end of the first menu entry's line that starts with "kernel"
- In the "vi" editor, you will need the following commands
 - Press "i" to enter insert mode
 - Press "esc" to end editing
 - Press ":w!" to save the file
 - Press ":q" to quit



26. Enter “exit” twice and Android will boot. Reboot once it’s up and it should boot into your new resolution!



27. Launch the Crafty app and connect to your vaporizer!

